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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,167	04/02/2004	Noboru Asauchi	Q80853	7872

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EXAMINER

FIDLER, SHELBY LEE

ART UNIT	PAPER NUMBER
2861	

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/816,167	ASAUCHI, NOBORU	
	<b>Examiner</b>	<b>Art Unit</b>	
	Shelby Fidler	2861	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Allowable Subject Matter*

The indicated allowability of claim 4 is withdrawn in view of the newly discovered reference(s) to Trontelj (US 6205235 B1). Rejections based on the newly cited reference(s) follow.

### *Claim Objections*

Claims 1 and 6 are objected to because of the following informalities: the recitation of "lessening" (line 10 of claim 1 and line 18 of claim 6) should be changed to "lessened." Appropriate correction is required.

Claim 4 is objected to because of the following informalities: the recitation of "connect" in line 2 should be changed to "connected." Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker (US 6676240 B2) in view of Trontelj (US 6208235 B1).

**Regarding claim 1:**

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**Walker teaches** an expendable container (*ink container 18*) storing an expendable (*ink; col. 4, lines 42-43*), the expendable container comprising:

a memory circuit (*linking device 38*) having a memory (*memory device 54*), an antenna (*antenna 70*) being capable of establishing non-contact communication (*col. 5, lines 12-17*) with an external receiver transmitter (*linking device 42*), and a controller (*serial controller 66*) controlling the non-contact communication and an access to the memory (*col. 5, lines 18-20*),

wherein the memory circuit has an ID information confirmation mode (*mode of normal operation*), the ID information mode being for the receiver transmitter to communicate with the memory circuit in order to confirm ID information of the expendable container (*col. 5, lines 1-7*).

**Walker does not expressly teach** that the memory circuit has a low power consumption mode, the low power consumption mode keeping lessened functions of the controller as long as the memory circuit is in operation;

wherein the memory circuit is capable of shifting to the low power consumption mode in response to a completion of confirmation of the ID information of the expendable container.

**However, Trontelj teaches** that the memory circuit (*transponder 12*) has a low power consumption mode (*when switch 34 is closed; col. 7, lines 14-18*), the low power consumption mode keeping lessened functions of the controller (*col. 8, line 65 – col. 9, line 4*) as long as the memory circuit is in operation (*col. 8, lines 53-57; examiner notes that col. 8, lines 57-62 shows that an optional timer, which re-opens the circuit, may be included into IC18. For the purpose of rejection, this timer is excluded from IC18*);

wherein the memory circuit is capable of shifting to the low power consumption mode in response to a completion of confirmation of the ID information of the expendable container (*col. 9, lines 6-9*).

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At the time of invention, it would have been obvious to a person of ordinary skill in the art to utilize a memory circuit capable of shifting to a low power consumption mode into Walker's invention. The motivation for doing so, as taught by Trontelj, is to provide a tag that does not disturb other nearby resonant tags (*col. 2, lines 8-10*).

**Regarding claim 2:**

Trontelj also teaches that the low power consumption mode is a disable mode for deactivating the controller's function (*col. 8, line 65 – col. 9, line 4*).

**Regarding claims 4 and 8:**

Trontelj also teaches a resonance circuit (*the circuit of Figs. 2*) that is connected to the antenna (*col. 4, lines 34-38*);

wherein the resonance circuit has a resonance frequency changing module (*switch 34*) to change a resonance frequency in response to the completion of confirmation of the ID information of the expendable container (*col. 8, lines 53-57 and Figs. 2*).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to utilize a resonance frequency changing module into the invention of Walker. The motivation for doing so, as taught by Trontelj, is to selectively decouple the transponder from its environment (*col. 2, lines 52-56*).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker (US 6676240 B2) as modified by Trontelj (US 6208235 B1), as applied to claim 2 above, and further in view of Patterson et al. (US 6356197 B1).

**Regarding claim 3:**

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**Trontelj also teaches** stopping the controller in response to completion of confirmation of the ID information of the expendable container (*col. 8, line 65 – col. 9, line 4 and col. 8, lines 53-57*).

**Walker as modified by Trontelj do not expressly teach** a reset signal generator configured to control activation and deactivation.

**However, Patterson et al. teach** a reset signal generator (*power rectifier 19*) configured to control activation and deactivation of the controller in response to a voltage level of a power generated by an electromagnetic induction (*col. 8, lines 29-31 and col. 4, lines 25-27; power rectifier 19 acts as a reset signal generator in that the rectifier selectively activates and deactivates logic control unit 16 dependent upon the power level*);

wherein the reset signal generator is configured to stop the controller (*col. 4, lines 25-27*).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to utilize a reset signal generator into the invention of Walker as modified by Trontelj. The motivation for doing so, as taught by Patterson et al., is to ensure that the memory circuit is inducing the energy required to properly function (*col. 8, lines 26-31*).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker (US 6676240 B2) as modified by Trontelj (US 6208235 B1), as applied to claim 1 above, and further in view of Marneweck et al. (US 2002/0175806 A1).

**Regarding claim 5:**

**Walker as modified by Trontelj teach all limitations except** that the memory circuit is configured to receive a preset command sent from the external receiver transmitter to the expendable container in response to the completion of confirmation of the ID information of the

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expendable container, and shift to the low power consumption mode in response to the reception of the preset command.

However, Marneweck et al. teach that the memory circuit (*tag circuit of Figure 2*) is configured to receive a preset command (*identification confirmation signal*) sent from the external receiver transmitter (*reader 11, paragraph 42, lines 39-42*) to the expendable container (*objects 15, paragraph 34, lines 1-5*) in response to the completion of confirmation of the ID information of the expendable container (*paragraph 42, lines 39-42*), and shift to the low power consumption mode in response to the reception of the preset command (*paragraph 42, lines 44-48 with flowchart of Figure 6 shows that upon stopping the algorithm, the reader must again wake-up each tag, inherently showing that the tags revert to sleep mode*).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to utilize a preset command to shift the memory circuit into low power consumption mode into the invention of Walker as modified by Trontelj. The motivation for doing so, as taught by Marneweck et al., is to properly identify tags when multiple tags are in the receiver transmitter's field (*paragraph 13, lines 1-3*).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kosugi (US 6585345 B2) in view of Trontelj (US 6208235 B1).

**Regarding claim 6:**

Kosugi teaches a device capable of loading an expendable container that stores an expendable, the device comprising:

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an expendable container loader (*carriage 12, Fig. 7*) capable of loading each of a plurality of expendable containers (*cartridges 31-34, Fig. 7*) storing expendables at each of a plurality of predetermined locations (*locations corresponding to cartridges 31-34, Fig. 7*);

a receiver transmitter (*transmitter-receiver 45, Fig. 7*) capable of establishing a non-contact communication with the plurality of expendable containers (*Fig. 6B*); and

a moving mechanism configured to move the expendable container loader (*col. 8, lines 3-9*), in order to allocate the receiver transmitter at a predetermined proximity position relative to each of the plurality of expendable containers (*col. 11, lines 47-50*),

wherein the expendable container comprises a memory circuit (*IC 41, Fig. 6A/B*) having a memory (*memory cell 417, Fig. 6B*), an antenna (*antenna 36, Fig. 6B*) being capable of establishing non-contact communication with an external receiver transmitter (*transmitter-receiver 45*) at the proximity position (*col. 11, lines 47-50*), and a controller (*CPU 50, Fig. 3*) controlling the non-contact communication and an access to the memory (*col. 8, lines 62-67*),

wherein the memory circuit has an ID information confirmation mode (*the mode of normal operation*), the ID information confirmation mode being for the receiver transmitter to communicate with the memory circuit in order to confirm ID information of the expendable container (*col. 6, lines 14-24*),

wherein the device is configured to confirm the ID informations of the plurality of expendable containers corresponding to the predetermined plurality of locations, at which the plurality of expendable containers are loaded (*col. 11, lines 39-42*), based on relative positions of the plurality of expendable containers to the receiver transmitter and the confirmed ID information of the multiple expendable containers (*col. 12, lines 23-31*).



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**Kosugi does not expressly teach** a low power consumption mode, the low power consumption mode being for lessening functions of the controller, the memory circuit being capable of shifting to the low power consumption mode in response to a completion of confirmation of the ID information of the expendable container.

**However, Trontelj teaches** a low power consumption mode (*when switch 34 is closed; col. 7, lines 14-18*), the low power consumption mode keeping lessened functions of the controller (*col. 8, line 65 – col. 9, line 4*) as long as the memory circuit is in operation (*col. 8, lines 53-57; examiner notes that col. 8, lines 57-62 shows that an optional timer, which re-opens the circuit, may be included into IC18. For the purpose of rejection, this timer is excluded from IC18*), the memory circuit is capable of shifting to the low power consumption mode in response to a completion of confirmation of the ID information of the expendable container (*col. 9, lines 6-9*).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to utilize a memory circuit capable of shifting to a low power consumption mode into Kosugi's invention. The motivation for doing so, as taught by Trontelj, is to provide a tag that does not disturb other nearby resonant tags (*col. 2, lines 8-10*).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kosugi (US 6585345 B2) as modified by Trontelj (US 6208235 B1), as applied to claim 6 above, and further in view of Marneweck et al. (US 2002/0175806 A1).

**Regarding claim 7:**

**Kosugi as modified by Trontelj teach all limitations except** that the receiver transmitter is capable of sending a command to the expendable container to shift the memory

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circuit to the low power consumption mode, in response to the completion of confirmation of ID information of the expendable container.

However, Marneweck et al. teach that the receiver transmitter (*reader 11, paragraph 44, lines 5-7*) is capable of sending a command to the expendable container (*tag 16, paragraph 44, line 3*) to shift the memory circuit to the low power consumption mode (*sleep mode, block 36 of flowchart in Figure 7*), in response to the completion of confirmation of ID information of the expendable container (*paragraph 19, lines 12-16*).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to utilize a preset command to shift the memory circuit into low power consumption mode into the invention of Walker as modified by Trontelj. The motivation for doing so, as taught by Marneweck et al., is to properly identify tags when multiple tags are in the receiver transmitter's field (*paragraph 13, lines 1-3*).

### *Response to Arguments*

Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection. Please see above rejections to Walker (US 6676240 B2) as modified by Trontelj (US 6208235 B1) and Kosugi (US 6585345 B2) as modified by Trontelj (US 6208235 B1), which disclose a low power consumption mode keeping lessened functions as long as the memory circuit is in operation.

In response to applicant's argument that the power rectifier of Patterson et al. does not provide a reset signal generation function, col. 8, lines 29-31 and col. 4, lines 25-27 of Patterson et al. shows that the power rectifier 19 acts as a reset signal generator in that the rectifier

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selectively activates and deactivates logic control unit 16. This activation and deactivation is dependent upon the power level.

*Communication with the USPTO*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelby Fidler whose telephone number is (571) 272-8455. The examiner can normally be reached on MWF 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vip Patel can be reached on (571) 272-2458. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SF 8/24/06

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